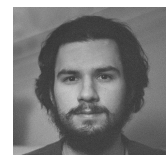


# Mark Tropin

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## Education

- 2020 – now **M.Sc., EPFL** in Computer Science.  
Specialization: *Data Analytics*.
- 2016 – 2020 **B.Sc., University of Geneva** in Computer Science.  
Thesis title: *Defense against adversarial attacks: towards a universal approach*.  
Designing robust AI methods for recognizing road signs in self-driving cars.  
Grade: 6.00/6.00.  
Keywords: AI, Machine Learning for Security, TensorFlow, Keras
- 2015 – 2016 **IB Bilingual Diploma**  
IB Diploma Score: 39/42.

## Employment History


- Sep 2023 – Mar 2024 **Tooling engineer.** Scala Center. Lausanne, Switzerland.  
Designing a tool for converting large Scala 2 codebases into Scala 3.  
Keywords: Scala 3, Scalafix, Scalameta, GitHub, CI, functional programming, compilers, parsing
- Oct 2020 – May 2021 **Research assistant.** University of Geneva. Geneva, Switzerland.  
Discovering novel ML methods for secure AI in self-driving cars.  
Keywords: academical research, Machine Learning, Deep Learning, cybersecurity
- Mar 2020 – May 2020 **Teaching assistant.** University of Geneva. Geneva, Switzerland.  
Teaching first-year pharmacology students. Designing new study materials.  
Keywords: Calculus, linear algebra, differential equations, Microsoft Excel, R
- Aug 2019 **Data Science Intern.** Digital Medic GmbH. Vienna, Austria.  
Data cleaning, data wrangling, product segmentation  
Keywords: Microsoft Excel, PostgreSQL, statistics

## Skills

- Languages **English (C1), French (B2), German (B1)**
- Coding **Python, SQL, Scala, Java, C++, Go, OCaml, MATLAB, Prolog, L<sup>A</sup>T<sub>E</sub>X**
- Libraries **NumPy, pandas, polars, Jupyter, seaborn, scikit-learn, statsmodels, TensorFlow, Keras, PyTorch, matplotlib, transformers, FastAPI**
- Tools **bash, git, ssh, docker, SLURM**
- Misc. **Academic research, data analysis, data engineering, software development**
- Soft skills **Critical thinking, problem solving, clear communication, collaboration, can-do attitude, resilience, presenting technical information in understandable ways, insatiable curiosity**

## Skills (continued)






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Research interests     Adversarial Machine Learning, Natural Language Processing, Machine Translation, Programming Language Design






## Miscellaneous Experience

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### Projects

- 2024     **Open-source contributions.**  
     learnxinyminutes-docs     keyboard-tester
- 2023     **Open-source contributions.**  
     awesome-advent-of-code

### Competitions

- 2024     **LLM Mini-Hackathon, Lausanne, Switzerland.** Winning team captain.  
     **PeaceTech Hackathon, Lausanne, Switzerland.** Winning team member.
- 2023     **LauzHack Hackathon, Lausanne, Switzerland.** Team captain.
- 2016     **National School Olympiad in English.** Semi-finalist.  
     **National School Olympiad in French.** Semi-finalist.

### Certifications

- 2014     **Introduction to Philosophy.** Awarded by University of Edinburgh.
- 2012     **Programming in C.** Awarded by Bauman Moscow State Technical University.
- 2011     **Programming in Pascal.** Awarded by Bauman Moscow State Technical University.

### Extracurricular interests

-  Music production, analog photography, blogging, literature, hiking.